

ENVIRONMENTAL Fact Sheet



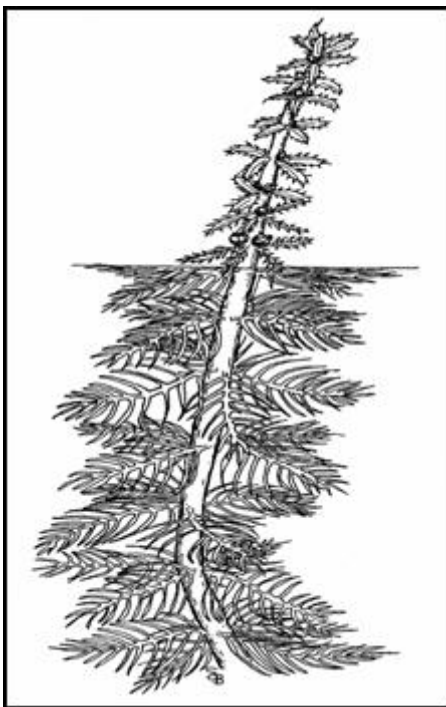
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Variable milfoil *Myriophyllum heterophyllum* (Michx)

Species Description/General Information



Milfoil is a submerged aquatic plant with fine densely packed, feather-like leaves whorled around a main stem. It can grow up to 15 feet and may exhibit a three- to six-inch green spike-like flower above the waterline in July. A cross-section of the stem will reveal "pie-shaped" air chambers.

This exotic species of milfoil has been in the state since the late 1960s, and can currently be found in over 50 waterbodies in New Hampshire. There are six native milfoil species present in the state that do not cause problems. Eurasian milfoil is another non-native milfoil found in New Hampshire, but it is less of a threat than variable milfoil due to our water chemistry.

Why is Milfoil Considered a Nuisance Species?

This species is not native to our state and is very difficult to control once it becomes fully established. Milfoil reproduces through fragmentation whereby plant fragments break off from the parent plant through wind or boat action, grow roots, and settle in a new location.

Milfoil spreads rapidly and displaces beneficial native plant life. It makes swimming difficult and can devalue waterfront property. Where this species grows in its native environment, insects and fish may feed on this plant at such a rate as to control its growth. In New Hampshire, milfoil has no natural predators to keep its population in check. Under optimum temperature, light and nutrient conditions, milfoil may grow up to an inch per day.

How Did Exotic Milfoil Become Established in This State?

It was most likely a "stowaway" fragment attached to a boat or trailer that came to this region. Milfoil can live out of water for many hours if it remains moist, like when it's wound around a wet carpeted bunk on a boat trailer. Milfoil is usually first found near boat launch sites.

Another theory is that milfoil was introduced to a New Hampshire waterbody through the dumping of a home aquarium. This plant is sometimes used as an ornamental plant in fish aquariums.

Once Established, How Does Milfoil Infest Other Areas of a Waterbody?

Boat propellers will chop milfoil plants into small fragments. These fragments float on the surface and are at the mercy of the wind and lake currents. In a short time, roots form on these fragments. If washed ashore, these plants eventually take hold creating a new colony of milfoil. The cycle goes on until every suitable area is filled in with these weeds. An alternative form of the plants develops during low water. This vegetation type is more succulent than the submersed form.

What Methods Are Currently Being Used to Control Milfoil?

Three methods are currently used to control variable milfoil. Hand-pulling of new infestations is one way to prevent a full-lake infestation, but these patches must be detected early. When the plants become too large to hand-pull, a benthic barrier may be placed on the lake bed by State divers to compress the plants to the bottom and block sunlight. This works only in very small patches. The other method for controlling plants when they become too large to pull or cover is the use of an aquatic herbicide. These herbicides can provide one to three years of control in a waterbody.

There is no way to eradicate the plant once it has become well established in a waterbody. DES is currently working with Dartmouth College to determine the genetics of the milfoil plants and to see if there is a possibility for future genetic control of the plant.

Have Chemicals Been Used to Effectively Control Exotic Milfoil?

One chemical treatment in the spring, during peak plant growth, is sufficient for milfoil control for the remainder of the treatment season, and perhaps into the next. Chemicals are usually the method of choice for small new infestations that are too large for hand-pulling or screening. However, attempts to eradicate extensive areas of weeds using chemicals are rarely effective. In most cases, the treated area becomes re-infested with fragments from other sections of the lake.

It is illegal to apply chemical herbicides to any New Hampshire waters unless you contract with a licensed applicator. The use of chemicals by an untrained person could jeopardize the health and welfare of the lake and its ecology. Inappropriate or inaccurate use of chemicals is life-threatening to people. It should be noted, however, that the state has been conducting herbicide applications for several years, and no negative impacts to non-target plants, animals, or humans have been observed.

For more information on milfoil or other Exotic Species, please contact the Exotic Species Coordinator at 603-271-2248 or asmagula@des.state.nh.us. Also, visit the Exotic Species website at www.des.state.nh.us/wmb/exoticspecies/.